

### REMARKS

This communication is being filed in response to the final Office Action having a mailing date of April 14, 2008. For the reasons set forth below, it is kindly requested that the rejections be reconsidered and withdrawn, since it is believed that the cited reference does not meet the limitations recited in the claims.

#### I. Discussion of the claims and cited reference

The final Office Action indicated that claims 6, 11-14, and 25-27 would be allowable if rewritten in independent form. The Examiner is thanked for this indication of allowable subject matter.

The final Office Action rejected claims 1-5, 7-10, 15-24, and 28-30 under 35 U.S.C. § 102(c) as being anticipated by Arai (U.S. Patent No. 7,224,672). For the reasons set forth below, these rejections are respectfully traversed.

#### A. Independent claim 1

Independent claim 1 recites, *inter alia*, “detecting such criterion includes obtaining an estimation of a length of a line” and “in response to said detection, disabling a number of carriers in order to establish the asymmetric operating mode of said modem.” Based on this language of claim 1, a number of carriers are disabled in response to the estimated length of the line, so as to establish the asymmetric operating mode of the modem.

In justifying the maintaining of the rejection of the claims, page 2 (section 2) of the final Office Action relied upon column 3, lines 50-55 and column 6, line 58 to column 7, line 6 of Arai as showing (emphasis ours):

“it is possible to autonomously measure, by a function equipped in an XDSL modem, a transmission loss concerning an analog signal on a subscriber line connected to the xDSL modem. Thus, since the line length of the subscriber line can be estimated, it is no longer necessary to send

workers from the provider to measure line length, and a risk that a provider had in setting up services can be drastically reduced.”

Assuming *arguendo* and *hypothetically* that Arai does indeed disclose the capability to measure line length, the final Office Action nevertheless has not identified any teaching of Arai that meets the further limitations of claim 1 that require “disabling a number of carriers in order to establish the asymmetric operating mode of said modem.”

From the above-quoted passage from the final Office Action, it appears that the final Office Action is interpreting “a risk that a provider had in setting up services can be drastically reduced” as being the same as “disabling a number of carriers in order to establish the asymmetric operating mode of said modem” recited in claim 1. This interpretation of Arai to reject claim 1 is respectfully traversed herein.

More particularly, the final Office Action has not provided a reasonable explanation, from a technical and/or logical point of view, as to how Arai’s provider’s reducing its “risk in setting up services” is the same as “disabling a number of carriers in order to establish the asymmetric operating mode of said modem” of claim 1.

Explained in another way, claim 1 is directed towards a modem that can be configured to operate in an asymmetric operating mode, by disabling a number of carriers in response to the estimated line length. Thus, the modem can be configured to operate in the asymmetric mode depending on the estimated line length.

In contrast, Arai is completely silent as to any disabling of a number of carriers in order to provide/operate/configure his modem in an asymmetric operating mode. More specifically, Arai provides a tool to enable the line characteristics to be measured ahead of time, before broadband communication services are provisioned in the first place. In this manner, the provider avoids the risks and initial expenses in setting up broadband communication services that may ultimately be determined to be of unsatisfactory service quality. Thus, the provider can decide ahead of time whether or not it will be practical or possible to provision/install broadband

communication services. Arai explains the following in his column 3, line 39 to column 4, line 65 (emphasis ours):

“The object of the present invention is to provide an xDSL modem capable of automatically collecting characteristics of a subscriber line connected thereto prior to a start of a broadband communication service ... Still another object of the present invention is to provide a key barometer for precisely estimating a line length of a subscriber line between a local switch and an xDSL modem of a customer, and deciding whether or not provision of a broadband communication service by use of an xDSL system is possible. Still another object of the present invention is to make it possible to autonomously measure, by a function equipped in an xDSL modem, a transmission loss concerning an analog signal on a subscriber line connected to the xDSL modem. Thus, since the line length of the subscriber line can be estimated, it is no longer necessary to send workers from the provider to measure line length, and a risk that the provider had in setting up services can be drastically reduced ... A still further object of the present invention is to make it unnecessary for a provider to send a maintenance worker for a measuring work, by collecting beforehand information concerning a line length of a subscriber line which is a very important barometer in estimating service quality of a broadband communication service by a xDSL system as well as concerning interference from an ISDN line near the subscriber line, and to drastically reduce risks that the provider had in setting up the broadband communication service. By this, the spread of the broadband communication service is strongly promoted ... Being able to measure transmission loss over a wide frequency band is very effective in

evaluating a service quality that can be expected on a line connected to the xDSL modem.”

Thus from the above-quoted passages, it is abundantly clear that Arai performs measurement of line length in order to determine whether or not to provision broadband communication services. He does not perform measurements of line length so as to disable a number of carriers in order to establish an asymmetric operating mode of his modem.

Accordingly for the foregoing reasons that Arai does not meet all of the limitations of claim 1, it is respectfully submitted that claim 1 is allowable over Arai. “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

B. Dependent claims 29-30

Dependent claims 29-30 recite, *inter alia*, top-down interoperability between said asymmetric operating mode and symmetric operation/operating mode. Interoperability between two operating modes of a modem, in particular top-down interoperability, is nowhere disclosed, taught, or suggested by Arai.

Nevertheless, page 5 (section 4) of the final Office Action has cited column 8, lines 44-65 as allegedly disclosing the limitations of claims 29-30. Column 8, lines 44-65 of Arai is reproduced below:

“In the evaluating unit 111, from a signal which is separated from an analog signal by the splitter 104 and is input to the digital transmitting unit 105 provided in the xDSL modem 103, the noise detecting unit 126 detects noises having a reception level equal to a threshold value or more, prior to a start of the provision of the broadband communication service. The periodicity examining unit 127 examines a periodicity of the noises detected by the noise detecting unit 126, and outputs the obtained

examination result as a barometer for evaluating the transmission characteristic of the subscriber line 102.

An operation of the sixth xDSL modem having the above-described constitution is as follows.

Prior to a start of the provision of the broadband communication service, the noise-detecting unit 126 detects the noises from the signal input to the digital transmitting unit 105 through the splitter 104. The periodicity examining unit 127 examines the detected noises whether or not detection timings have a periodicity equivalent to a periodicity of a predetermined synchronous signal, whereby an evaluation barometer of a degree of interference from the ISDN line, which is one of factors having adverse influences on a data communication by use of the xDSL system, is obtained.”

It is clear from the above-quoted passage of Arai relied upon by the final Office Action that he nowhere discloses, teaches, or suggests interoperability between an asymmetric operating mode of the modem and a symmetric operating mode of the modem. The above-quoted passage of Arai is merely discussing the detection and evaluation of noise in order to determine characteristics of the ISDN line. If the Examiner believes that the above-quoted passage of Arai does indeed disclose the interoperability between asymmetric and symmetric operating modes of the modem, then the Examiner is kindly requested to specifically identify the lines/language/phrases in the above-quoted passage (or other passage) of Arai where such disclosure is found.

In view of the fact that Arai does not meet the limitations of claims 29-30, claims 29-30 are allowable.

C. Independent claims 7, 16, and 21

Independent claim 7 recites language generally corresponding to claim 1 discussed above, in means-plus-function language. For example, claim 8 recites a modem that includes, *inter alia*, “means for controlling, based on said detection of said criterion, disablement of a number of carriers in order to establish the asymmetric operating mode.” As previously explained above, Arai does not meet these limitations, since Arai uses his line measurement data to determine whether or not to provision broadband communication services, rather than to disable carriers in order to establish an asymmetric operating mode of a modem. Hence, claim 7 is allowable over Arai.

Independent claim 16 recites, *inter alia*, “configuring a modem for interoperability between first and second xDSL operating modes.” As previously explained above, Arai does not disclose, teach, or suggest such a modem that can be configured for interoperability between two xDSL operating modes. Claim 16 further recites, *inter alia*, “disabling a number of carriers associated with the second operating mode to establish the first operating mode.” Also as previously alluded to above, Arai does not perform the recited disabling of carriers of the second operating mode in order to switch from the second operating mode to the first operating mode. Rather, he measures line length in order to decide whether to provision broadband communication services. Thus, claim 16 is allowable over Arai.

Independent claim 21 also recites a modem having, *inter alia*, interoperability between first and second xDSL modes, and “disable a number of carriers associated with the second mode to establish the first mode, in response to the criterion detected by the first component.” As previously explained above, Arai does not meet these limitations for a modem with interoperability between two xDSL modes and limitations pertaining to the disablement of carriers in order to establish the first mode. Hence, claim 21 is also allowable

II. Conclusion

For the foregoing reasons set forth above, it is believed that the claims are in allowable form. The attorney of record (Dennis M. de Guzman) would be greatly appreciative of any feedback from the Examiner, including a telephone conference, to further discuss the claims, if it appears that there may be opportunities to reach an agreement that will place the application in condition for allowance.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,  
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